**Migration of existing IT/OT Infrastructure of sites including the implementation of new Remote Control Room at Riyadh HQ**

Request for Proposal

Version 2.0

**Change History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Change Summary** | **Changed By** | **Change Date** |
| 2.0 | First Release |  | 27 Apr 23 |
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# Initiative Overview

Presently at Sites, Honeywell EPKS/TMS R43X is present and required to be Migrated from the current platform to the EPKS/TMS R520 or latest including the existing hardware refresh.

This is including the new implementation of the HQ Central control room using Honeywell 3 position Orion station to accommodate EPKS, Honeywell Cyber Forge & Honeywell Terminal Management.

All existing and new servers and workstations shall be migrated to the latest hardware using Honeywell HP qualified models and Cisco for network switches and Firewalls.

All existing firmware for the sites Honeywell controllers (ML200, SM & C300) shall be Migrated to the latest software.

Also new applications/software shall be provided as listed below:

* Experion® Augmented Remote Operations (ARO) solution
* Honeywell’s Industrial Cyber Security Services including remote access to the plants of seven sites
* Antivirus/Patch Management Server
* Forge Managed Security Services (MSS)
* Forge-Premium
* Experion Backup & Restore Server

This scope of work shall cover all the site listed below:

* Riyadh HQ
* Dammam
* Jeddah
* Madineh
* Riyadh
* Al Taif
* Qassim
* Abha

These sites and systems shall have IT infrastructure covering compute, storage, backup and restore, networking, and security. These requirements shall be stipulated in the below-mentioned BOQ table. However, the specifications do not necessarily represent the latest or desired hardware and software but the latest qualified hardware and software shall be proposed.

The project scope covers 7 sites and HQ, with the requirements of each site listed in the BOQ table.

# Proposal Format

Honeywell must adhere to the following proposal format.

**Technical Proposal**

* Offer Summary
* BOQ
* Solution Description
* Vendor approach (timeline, resources, delivery model, training)
* Hardware and software requirements
* Prerequisites and assumptions

**Commercial Proposal**

* Offer Summary
* Pricing as per BOQ table
* Payment schedule as per the Deliverables section
* Terms & Conditions

# SCOPE OF WORK

## PROJECT SCOPE OF WORK

Design, engineering, project management, supply, installation, FAT, SAT, commissioning, documentation and training as per below:

## Head Quarter

* Supply 1x new 3 Orion Positions.
* Supply 3x HP Z4 G4 machines for Orion.
* Supply 2x CISCO 9200L Switches - 24 Ports.
* Supply 10x STP CAT5 CABLE W/RJ-45 CONN - 20M (Yellow).
* Supply 10x STP CAT5 CABLE W/RJ-45 CONN - 20M (Green).
* Forge Managed Security Services (MSS)
	+ 1 x L3 Service Node Server
	+ 1-year MSS subscription Service
	+ Implementation services for Secure Remote Access solution
	+ End node client installation and onboarding to the Service Node server
* Forge Premium Services
	+ 1 x SC Server
	+ Installation and configuration Services

## Riyadh

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 version or latest with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162 or latest.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
* Existing Fast ethernet and Relay board will be replaced by new Hardware in Master Logix system.
* Existing Terminal Management application release migration from R633 to R700 or latest.
* Network Infrastructure
	+ 2 x L2 Switches
	+ 1 x L3 Switches
	+ 1 x 3rd party NGFWs
	+ 1 x L3.5 Switches
	+ Implementation services for the Network Devices
* Antivirus (AV)
	+ 1 x L3 AV Server
	+ 7 x AV Client Licenses
	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

## Jeddah

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 or latest version with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162 or latest.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
* Existing Fast ethernet and Relay board will be replaced by new Hardware in Master Logix system.
* Existing Terminal Management application release migration from R633 to R700 or latest.
* Network Infrastructure
	+ 2 x L2 Switches
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	+ 7 x AV Client Licenses
	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

## Dammam

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 or latest version with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162 or latest.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
* Existing Fast ethernet and Relay board will be replaced by new Hardware in Master Logix system.
* Existing Terminal Management application release migration from R633 to R700 or latest.
* Network Infrastructure
	+ 2 x L2 Switches
	+ 1 x L3 Switches
	+ 1 x 3rd party NGFWs
	+ 1 x L3.5 Switches
	+ Implementation services for the Network Devices
* Antivirus (AV)
	+ 1 x L3 AV Server
	+ 7 x AV Client Licenses
	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

## Abha

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 or latest version with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162 or latest.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
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	+ 1 x L3 AV Server
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	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

## Taif

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 or latest version with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162 or latest.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
* Existing Fast ethernet and Relay board will be replaced by new Hardware in Master Logix system.
* Existing Terminal Management application release migration from R633 to R700 or latest.
* Network Infrastructure
	+ 2 x L2 Switches
	+ 1 x L3 Switches
	+ 1 x 3rd party NGFWs
	+ 1 x L3.5 Switches
	+ Implementation services for the Network Devices
* Antivirus (AV)
	+ 1 x L3 AV Server
	+ 7 x AV Client Licenses
	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

## Al Madinah

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 or latest version with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
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	+ 1 x L3 AV Server
	+ 7 x AV Client Licenses
	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

## Qassim

* Migration of 1 x redundant Experion server (ESV) with Hardware Refresh.
* Migration of 3 x Experion Flex station (ESF) to R520 or latest version with Hardware Refresh.
* Supply 1x ARO Server & 1x ARO Gateway Server.
* Supply 1x Experion station License in each remote location for ARO Client connection.
* HMI Migration to EPKS R520 or latest.
* Off-process migration of existing Non-redundant Safety Manager to R162 or latest.
* Supply and Configuration of 1x EBR Server (HP DL360 GEN10) & Network-attached storage (NAS – Dell PE R350XE) with 4x EBR Server license and 3x EBR Workstation license.
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	+ 1 x L3.5 Switches
	+ Implementation services for the Network Devices
* Antivirus (AV)
	+ 1 x L3 AV Server
	+ 7 x AV Client Licenses
	+ Implementation services for the Antivirus solution
	+ End node client installation and onboarding to the AV server
* Patch Management
	+ Implementation services for the Patch Management solution
	+ End node onboarding to the WSUS server
* Forge Premium
	+ 1 x VSE Server
	+ Installation and configuration Services

# Bill of Quantities

The below BOQ table shall be follow. However, the latest qualified models shall be provided during the Functional design stage (FDS).

The project scope covers 7 sites, with the requirements of each site listed in the BOQ table.

| **Sr. No.** | **Part No.** | **DESCRIPTION** | **QTY** |
| --- | --- | --- | --- |
|  |  | **Head Quarter (HQ)** |  |
|  |  | **Experion Hardware / Software** |  |
| 1 | CF-CTD001 | Ship Crate-PC-RD-NPK-48x48x36 | 6 |
| 2 | CF-MSD000 | Ship Crate-IMH-RD-NPK-48x48x52 | 2 |
| 3 | CF-OR3PT1 | Double Crate for 3 Position Console | 1 |
| 4 | CF-ORAUT3 | CRATE FOR DOUBLE AUXILIARY UNIT | 1 |
| 5 | CF-ORLJR1 | CRATE FOR LIFT JACKS AND RAMPS | 1 |
| 6 | MP-OCEXT1-100 | ORION CONSOLE 3 POSITION LEFT AUX UNIT | 1 |
| 7 | MP-OCXDL1 | ORION CONS AUX EQUIP DOUBLE UNIT LEFT | 1 |
| 8 | MP-OCLJS1 | ORION CONSOLE LIFT JACKS | 1 |
| 9 | TP-FPH552 | 55 UHD MONITOR SAMSUNG QM55F | 3 |
| 10 | TP-OCSDB1 | ORION CONSOLE DELL USB SOUNDBAR | 3 |
| 11 | MZ-PCWS85 | WKS PC HP Z4 G4 RAID1 INTEL CL | 3 |
| 12 | TP-PCMCF1-101 | CLASSIC CONSOLE MTG FIXED RAILS FOR EPKS | 3 |
| 13 | TP-PCMCS1-101 | CLASSIC CONSOLE MTG SLIDE TRAY FOR EPKS | 3 |
| 14 | EP-COAW19 | WINDOWS 10 IOT ENT LTSC 2019 COA | 3 |
| 15 | SI-920LN4 | SWITCH, CISCO9200L, NON ROUTE, 24PORT | 2 |
| 16 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 3 |
| 17 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 3 |
| 18 | 51305786-502 | STP CAT5 CROSSOVER CABLE - 2 MT | 1 |
|  |  | **Forge Managed Security Services** |  |
| 1 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 2 | MZ-PCVMM5 | VIRT DELL R640XL MGMT MLK 1CPU | 1 |
| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
| 4 | CS-MSS-IPS-ANL | MSS-IPSecurity Annual Service | 1 |
| 5 | CS-MSS-SEC-TOK | MSS-Token Access Base Service | 1 |
| 6 | CS-MSS-IPSB | MSS-IPSecurity Base Service | 1 |
| 7 | CS-MSS-SEC-TOK-ANL | MSS Token Access Annual Service | 1 |
|  |  | **Forge Premium-SC** |  |
| 1 | MZ-PCVM21 | VIRT PC HW DELL R740XL MLK PERF-A | 2 |
| 2 | EP-COADC5 | Win Srvr2016 Dat cntr(x64) HPS Reins DVD | 2 |
| 3 | EP-VESPB7 | VMWARE ESSENTIALS PLUS 7 | 1 |
| 4 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
| 5 | CS-HFCP-USR25 | HFCP - 25 USER PACK | 1 |
| 6 | CS-HFCP-CNTR-VSE | HFCP-CENTER VSE | 1 |
| 7 | CS-HFCP-SUPP-VSE | HFCP-SUPPORT VSE | 1 |
| 8 | CS-HFCP-PREMIUM | HFCP - ENTERPRISE PREMIUM PRODUCTION | 1 |
| 9 | CS-HFCP-PREM-200P | HFCP-MEDIA KIT-PREMIUM | 1 |
|  |  |  |  |
| 1 | Rittal/Eqv | Cabinet | 1 |
|  |  | **Dammam** |  |
|  |  | **Experion upgrade** |  |
| 1 | EP-UPANR3 | EXPERION PKS UPGRADE UNIT - RELEASE MINUINCLUDES TERMINAL MANAGEMENT APP | 230 Units |
| 2 | TP-ZESVR4 | UPG, EPKS SERVER, DL360P GEN10, RAID5 | 2 |
| 3 | TP-ZESCH4 | UPG, EPKS STATION, HPZ4G4 | 3 |
| 4 |  | Microsoft Excel / Word 2019 OEM | 8 |
| 5 |  | Microsoft Office Professional Plus 2019 OEM | 1 |
|  |  | **ARO (Augmented Remote Operations)** |  |
| 1 | EP-STAT01 | EXPERION STATION | 1 |
| 2 | EP-T09CAL | Windows Server 2019 RDS CAL /51156155 | 1 |
| 3 | MZ-SQLCL4 | Microsoft SQL Client Access License | 1 |
| 4 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 5 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 2 |
| 6 | MZ-PCEH17 | 600GB HDD EXP HPE | 2 |
| 7 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 8 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **New EBR Server** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 3 | MZ-NWSTR6 | NETWORK STORAGE DELL R350XE STD | 1 |
| 4 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 5 | EP-BRM520-ESD | EXPERION BACKUP-RESTORE ESD MEDIA R520 | 1 |
| 6 | EP-BRSE06 | EBR R520 SERVER NODE LICENSE | 4 |
| 7 | EP-BRWE06 | EBR R520 WORKSTATION NODE LICENSE | 3 |
| 8 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 9 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **SM upgrade** |  |
| 1 | FS-SMSBUPL162-01 | UPGRADE SB R162 STANDARD | 1 |
|  |  | **Master Logix upgrade** |  |
| 1 | 2MLL-EFMTB | Fast Ethernet, RJ45 | 2 |
| 2 | R32C-NS5A-40P | SMART LINK Relay BOARD 40P | 3 |
|  |  |  **Network Infrastructure** |  |
| 1 | SI-9300R4 | SWITCH, CISCO9300, ROUTE,24PORT RED PSU | 1 |
| 2 | CON-SNT-C93002TA | SNTC-8X5XNBD Catalyst 9300 24-port data only | 1 |
| 3 | SI-920LN4 | SWITCH, CISCO9200, NON-ROUTE,24PORT | 3 |
| 4 | CON-SNT-C920L24T | SNTC-8X5XNBD Catalyst 9200 24-port data only | 3 |
| 5 | 51305482-102 | T CABLE WITH YELLOW BOOTS (2M) | 3 |
| 6 | TP-USBC30-100 | CABLE CABINET KVM 3M | 2 |
| 7 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN) | 2 |
| 8 | FortiGate-100F | FortiGate-100F Security Appliance | 1 |
| 9 | FC-10-F100F-811-02-12 | FortiGate-100F 24x7 Enterprise Protection | 1 |
|  |  |  **Forge Premium - VSE** |  |
| 1 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 2 | MZ-PCVMM5 | VIRT DELL R640XL MGMT MLK 1CPU | 1 |
| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
| 4 | CS-HFCP-VSP | HFCP - VIRTUAL SECURITY PROXY | 1 |
| 5 | CS-HFCP-AST25-PR | HFCP-25 PREMIUM ASSET PACK | 1 |
| 6 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
|  |  | **Antivirus (AV)** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 3 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 4 |  | McAfee Endpoint Threat Protection - license + 1 Year Gold Software Support (1-25) | 7 |
|  |  | **Jeddah** |  |
|  |  | **Experion upgrade** |  |
| 1 | EP-UPANR3 | EXPERION PKS UPGRADE UNIT - RELEASE MINUINCLUDES TERMINAL MANAGEMENT APP | 230 Units |
| 2 | TP-ZESVR4 | UPG, EPKS SERVER, DL360P GEN10, RAID5 | 2 |
| 3 | TP-ZESCH4 | UPG, EPKS STATION, HPZ4G4 | 3 |
| 4 |  | Microsoft Excel / Word 2019 OEM | 8 |
| 5 |  | Microsoft Office Professional Plus 2019 OEM | 1 |
|  |  | **ARO (Augmented Remote Operations)** |  |
| 1 | EP-STAT01 | EXPERION STATION | 1 |
| 2 | EP-T09CAL | Windows Server 2019 RDS CAL /51156155 | 1 |
| 3 | MZ-SQLCL4 | Microsoft SQL Client Access License | 1 |
| 4 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 5 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 2 |
| 6 | MZ-PCEH17 | 600GB HDD EXP HPE | 2 |
| 7 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 8 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **New EBR Server** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 3 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 4 | MZ-NWSTR6 | NETWORK STORAGE DELL R350XE STD | 1 |
| 5 | EP-BRM520-ESD | EXPERION BACKUP-RESTORE ESD MEDIA R520 | 1 |
| 6 | EP-BRSE06 | EBR R520 SERVER NODE LICENSE | 4 |
| 7 | EP-BRWE06 | EBR R520 WORKSTATION NODE LICENSE | 3 |
| 8 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 9 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **SM upgrade** |  |
| 1 | FS-SMSBUPL162-01 | UPGRADE SB R162 STANDARD | 1 |
|  |  | **Master Logix upgrade** |  |
| 1 | 2MLL-EFMTB | Fast Ethernet, RJ45 | 2 |
| 2 | R32C-NS5A-40P | SMART LINK Relay BOARD 40P | 3 |
|  |  |  **Network Infrastructure** |  |
| 1 | SI-9300R4 | SWITCH, CISCO9300, ROUTE,24PORT RED PSU | 1 |
| 2 | CON-SNT-C93002TA | SNTC-8X5XNBD Catalyst 9300 24-port data only | 1 |
| 3 | SI-920LN4 | SWITCH, CISCO9200, NON-ROUTE,24PORT | 3 |
| 4 | CON-SNT-C920L24T | SNTC-8X5XNBD Catalyst 9200 24-port data only | 3 |
| 5 | 51305482-102 | T CABLE WITH YELLOW BOOTS (2M) | 3 |
| 6 | TP-USBC30-100 | CABLE CABINET KVM 3M | 2 |
| 7 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN) | 2 |
| 8 | FortiGate-100F | FortiGate-100F Security Appliance | 1 |
| 9 | FC-10-F100F-811-02-12 | FortiGate-100F 24x7 Enterprise Protection | 1 |
|  |  |  **Forge Premium - VSE** |  |
| 1 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 2 | MZ-PCVMM5 | VIRT DELL R640XL MGMT MLK 1CPU | 1 |
| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
| 4 | CS-HFCP-VSP | HFCP - VIRTUAL SECURITY PROXY | 1 |
| 5 | CS-HFCP-AST25-PR | HFCP-25 PREMIUM ASSET PACK | 1 |
| 6 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
| 7 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
|  |  | **Antivirus (AV)** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 3 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
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| 3 | TP-ZESCH4 | UPG, EPKS STATION, HPZ4G4 | 3 |
| 4 |  | Microsoft Excel / Word 2019 OEM | 8 |
| 5 |  | Microsoft Office Professional Plus 2019 OEM | 1 |
|  |  | **ARO (Augmented Remote Operations)** |  |
| 1 | EP-STAT01 | EXPERION STATION | 1 |
| 2 | EP-T09CAL | Windows Server 2019 RDS CAL /51156155 | 1 |
| 3 | MZ-SQLCL4 | Microsoft SQL Client Access License | 1 |
| 4 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 5 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 2 |
| 6 | MZ-PCEH17 | 600GB HDD EXP HPE | 2 |
| 7 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 8 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **New EBR Server** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 3 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 4 | MZ-NWSTR6 | NETWORK STORAGE DELL R350XE STD | 1 |
| 5 | EP-BRM520-ESD | EXPERION BACKUP-RESTORE ESD MEDIA R520 | 1 |
| 6 | EP-BRSE06 | EBR R520 SERVER NODE LICENSE | 4 |
| 7 | EP-BRWE06 | EBR R520 WORKSTATION NODE LICENSE | 3 |
| 8 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 9 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **SM upgrade** |  |
| 1 | FS-SMSBUPL162-01 | UPGRADE SB R162 STANDARD | 1 |
|  |  | **Master Logix upgrade** |  |
| 1 | 2MLL-EFMTB | Fast Ethernet, RJ45 | 2 |
| 2 | R32C-NS5A-40P | SMART LINK Relay BOARD 40P | 2 |
|  |  |  **Network Infrastructure** |  |
| 1 | SI-9300R4 | SWITCH, CISCO9300, ROUTE,24PORT RED PSU | 1 |
| 2 | CON-SNT-C93002TA | SNTC-8X5XNBD Catalyst 9300 24-port data only | 1 |
| 3 | SI-920LN4 | SWITCH, CISCO9200, NON-ROUTE,24PORT | 3 |
| 4 | CON-SNT-C920L24T | SNTC-8X5XNBD Catalyst 9200 24-port data only | 3 |
| 5 | 51305482-102 | T CABLE WITH YELLOW BOOTS (2M) | 3 |
| 6 | TP-USBC30-100 | CABLE CABINET KVM 3M | 2 |
| 7 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN) | 2 |
| 8 | FortiGate-100F | FortiGate-100F Security Appliance | 1 |
| 9 | FC-10-F100F-811-02-12 | FortiGate-100F 24x7 Enterprise Protection | 1 |
|  |  |  **Forge Premium-VSE** |  |
| 1 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 2 | MZ-PCVMM5 | VIRT DELL R640XL MGMT MLK 1CPU | 1 |
| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
| 4 | CS-HFCP-VSP | HFCP - VIRTUAL SECURITY PROXY | 1 |
| 5 | CS-HFCP-AST25-PR | HFCP-25 PREMIUM ASSET PACK | 1 |
| 6 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
|  |  | **Antivirus (AV)** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 3 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 4 |  | McAfee Endpoint Threat Protection - license + 1 Year Gold Software Support (1-25) | 7 |
|  |  | **Riyadh** |  |
|  |  | **Experion upgrade** |  |
| 1 | EP-UPANR3 | EXPERION PKS UPGRADE UNIT - RELEASE MINUINCLUDES TERMINAL MANAGEMENT APP | 230 Units |
| 2 | TP-ZESVR4 | UPG, EPKS SERVER, DL360P GEN10, RAID5 | 2 |
| 3 | TP-ZESCH4 | UPG, EPKS STATION, HPZ4G4 | 3 |
| 4 |  | Microsoft Excel / Word 2019 OEM | 8 |
| 5 |  | Microsoft Office Professional Plus 2019 OEM | 1 |
|  |  | **ARO (Augmented Remote Operations)** |  |
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| 4 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 5 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 2 |
| 6 | MZ-PCEH17 | 600GB HDD EXP HPE | 2 |
| 7 | 51305482-120 | STP CAT5 CABLE W/RJ-45 CONN - 20M (YELLO | 2 |
| 8 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **New EBR Server** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 3 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 4 | MZ-NWSTR6 | NETWORK STORAGE DELL R350XE STD | 1 |
| 5 | EP-BRM520-ESD | EXPERION BACKUP-RESTORE ESD MEDIA R520 | 1 |
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| 7 | EP-BRWE06 | EBR R520 WORKSTATION NODE LICENSE | 3 |
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| 9 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN | 2 |
|  |  | **SM upgrade** |  |
| 1 | FS-SMSBUPL162-01 | UPGRADE SB R162 STANDARD | 1 |
|  |  | **Master Logix upgrade** |  |
| 1 | 2MLL-EFMTB | Fast Ethernet, RJ45 | 2 |
| 2 | R32C-NS5A-40P | SMART LINK Relay BOARD 40P | 3 |
|  |  |  **Network Infrastructure** |  |
| 1 | SI-9300R4 | SWITCH, CISCO9300, ROUTE,24PORT RED PSU | 1 |
| 2 | CON-SNT-C93002TA | SNTC-8X5XNBD Catalyst 9300 24-port data only | 1 |
| 3 | SI-920LN4 | SWITCH, CISCO9200, NON-ROUTE,24PORT | 3 |
| 4 | CON-SNT-C920L24T | SNTC-8X5XNBD Catalyst 9200 24-port data only | 3 |
| 5 | 51305482-102 | T CABLE WITH YELLOW BOOTS (2M) | 3 |
| 6 | TP-USBC30-100 | CABLE CABINET KVM 3M | 2 |
| 7 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN) | 2 |
| 8 | FortiGate-100F | FortiGate-100F Security Appliance | 1 |
| 9 | FC-10-F100F-811-02-12 | FortiGate-100F 24x7 Enterprise Protection | 1 |
|  |  |  **Forge Premium-VSE** |  |
| 1 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 2 | MZ-PCVMM5 | VIRT DELL R640XL MGMT MLK 1CPU | 1 |
| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
| 4 | CS-HFCP-VSP | HFCP - VIRTUAL SECURITY PROXY | 1 |
| 5 | CS-HFCP-AST25-PR | HFCP-25 PREMIUM ASSET PACK | 1 |
| 6 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
|  |  | **Antivirus (AV)** |  |
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| 3 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 4 |  | McAfee Endpoint Threat Protection - license + 1 Year Gold Software Support (1-25) | 7 |
|  |  | **Al Taif** |  |
|  |  | **Experion upgrade** |  |
| 1 | EP-UPANR3 | EXPERION PKS UPGRADE UNIT - RELEASE MINUINCLUDES TERMINAL MANAGEMENT APP | 230 Units |
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| 3 | TP-ZESCH4 | UPG, EPKS STATION, HPZ4G4 | 3 |
| 4 |  | Microsoft Excel / Word 2019 OEM | 8 |
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| 4 | EP-COAS19 | Windows Server 2019 COA | 2 |
| 5 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 2 |
| 6 | MZ-PCEH17 | 600GB HDD EXP HPE | 2 |
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|  |  | **New EBR Server** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 3 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 4 | MZ-NWSTR6 | NETWORK STORAGE DELL R350XE STD | 1 |
| 5 | EP-BRM520-ESD | EXPERION BACKUP-RESTORE ESD MEDIA R520 | 1 |
| 6 | EP-BRSE06 | EBR R520 SERVER NODE LICENSE | 4 |
| 7 | EP-BRWE06 | EBR R520 WORKSTATION NODE LICENSE | 3 |
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|  |  | **SM upgrade** |  |
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|  |  | **Master Logix upgrade** |  |
| 1 | 2MLL-EFMTB | Fast Ethernet, RJ45 | 2 |
| 2 | R32C-NS5A-40P | SMART LINK Relay BOARD 40P | 2 |
|  |  |  **Network Infrastructure** |  |
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| 3 | SI-920LN4 | SWITCH, CISCO9200, NON-ROUTE,24PORT | 3 |
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| 6 | TP-USBC30-100 | CABLE CABINET KVM 3M | 2 |
| 7 | 51305482-220 | STP CAT5 CABLE W/RJ-45 CONN - 20M (GREEN) | 2 |
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| 9 | FC-10-F100F-811-02-12 | FortiGate-100F 24x7 Enterprise Protection | 1 |
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| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
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|  |  | **Antivirus (AV)** |  |
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| 3 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
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|  |  | **New EBR Server** |  |
| 1 | MZ-PCSV84 | SERVER PC HPE DL360 GEN10 RAID5 1U RACK | 1 |
| 2 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 3 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 4 | MZ-NWSTR6 | NETWORK STORAGE DELL R350XE STD | 1 |
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| 3 | EP-VFNDB7 | VMWARE VSPHERE FOUNDATION 7 | 1 |
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| 6 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
|  |  | **Antivirus (AV)** |  |
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| 6 | CS-HFCP-VSE-PR | HFCP -VIRTUAL SECURITY ENGINE PREMIUM | 1 |
|  |  | **Antivirus (AV)** |  |
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| 2 | EP-COAS19 | Windows Server 2019 COA | 1 |
| 3 | MZ-PCEH17 | 600GB HDD EXP HPE | 1 |
| 4 |  | McAfee Endpoint Threat Protection - license + 1 Year Gold Software Support (1-25) | 7 |

# Scope of Work

The scope involves the delivery of the following work packages.

## Hardware

Honeywell shall supply the required hardware and appliances in accordance with the BOQ to be reviewed and confirmed by respective. All hardware components and parts required for the Migration solution should be supplied and Honeywell must ensure that power supply, cabling, and other site requirements have been addressed. In this regard, Honeywell should coordinate with to conduct site survey of all the sites after awarding. All hardware equipment and components should have a minimum of 3 years warranty.

## Licensing

Honeywell shall supply the latest qualified software and virtual appliances in accordance with the BOQ to be reviewed and confirmed by respective. The overall goal of deploying an optimal software solution for OT should be considered. In-scope software should have a 3-year subscription.

## Deployment

The deployment work package includes all activities to commission the requested infrastructure solution. This includes the delivery, inspection, installation, configuration, integration, tuning, hardening, and testing of constituent hardware and software. personnel will validate the delivery of the BOQ and supervise system and acceptance testing that will be undertaken by Honeywell.

Honeywell shall provide complete and up to date documentation of the proposed solution by providing site survey documents, design specifications, system manuals, operational manuals, and user guides. Delivery acceptance will not be provided in absence of documentation.

## Support

Honeywell shall provide site support for the proposed system using the on-going on-call services contact between and Honeywell.

## Training

Honeywell shall provide the training to personal at Honeywell facility as below:

* EPKS/TMS Operator training for xxx persons
* EPKS engineering training for xxx person

## General Requirements

* Honeywell shall prepare a simplified project plan (Word/PPT) and project schedule (Microsoft Project)
* Bi-Weekly Meeting at HQ shall be perform and weekly progress report shall be submitted.